

**UDP Results for the RC Rat-Only Weight Regression Excluding Substances with Specific Mechanisms of Toxicity Starting at Estimated LD50 5000 mg/kg Upper Limit**  
**Results for 46 chemicals for the 3T3 NRU and 47 chemicals for the NHK NRU**  
 (see notes to Table 6-5 for chemicals excluded)

**Summary of Animals Used by Cell Type**

Cell	Sigma	Method	Std. Error	Animals	Difference	P-Value*	% Savings
3T3	0.12	Cyto	0.328	7.10	1.07	<b>0.0026</b>	13.1%
		Default	0.243	8.18			
	0.25	Cyto	0.306	7.82	1.22	<b>0.0011</b>	13.5%
		Default	0.240	9.04			
	0.5	Cyto	0.256	8.57	1.24	<b>&lt;.0001</b>	12.7%
		Default	0.204	9.82			
	1.25	Cyto	0.222	9.14	1.21	<b>&lt;.0001</b>	11.7%
		Default	0.166	10.36			
	2	Cyto	0.199	9.28	1.05	<b>&lt;.0001</b>	10.2%
		Default	0.131	10.33			
Average Animal Difference:					1.16		

NHK	0.12	Cyto	0.334	7.08	1.07	<b>0.0036</b>	13.1%
		Default	0.245	8.15			
	0.25	Cyto	0.323	7.79	1.20	<b>0.0007</b>	13.4%
		Default	0.238	9.00			
	0.5	Cyto	0.273	8.54	1.26	<b>&lt;.0001</b>	12.8%
		Default	0.200	9.80			
	1.25	Cyto	0.234	9.15	1.26	<b>&lt;.0001</b>	12.1%
		Default	0.155	10.40			
	2	Cyto	0.212	9.30	1.04	<b>&lt;.0001</b>	10.1%
		Default	0.123	10.34			
Average Animal Difference:					1.17		

**Summary of Animal Deaths by Cell Type**

Cell Type	Sigma	Method	3 Animals at Limit Dose	5 Reversals	Likelihood Ratio	Max Animals	Animals Used	Animals Dead	% Deaths
3T3	0.12	Cyto	23.84%	49.81%	23.59%	2.76%	7.10	3.51	49.4%
		Default	23.33%	51.87%	21.28%	3.53%	8.18	3.47	42.4%
	0.25	Cyto	23.15%	30.80%	41.34%	4.71%	7.82	3.85	49.2%
		Default	22.47%	32.17%	37.75%	7.61%	9.04	3.83	42.3%
	0.5	Cyto	20.66%	18.46%	53.20%	7.68%	8.57	4.24	49.5%
		Default	19.61%	19.24%	47.50%	13.66%	9.82	4.20	42.8%
	1.25	Cyto	15.29%	12.83%	60.20%	11.68%	9.14	4.62	50.5%
		Default	13.30%	13.35%	53.00%	20.35%	10.36	4.63	44.8%
	2	Cyto	13.41%	11.68%	61.92%	13.00%	9.28	4.71	50.7%
		Default	10.49%	12.40%	56.43%	20.68%	10.33	4.75	45.9%
NHK	0.12	Cyto	25.41%	49.08%	22.59%	2.91%	7.08	3.45	48.7%
		Default	25.02%	50.91%	20.52%	3.55%	8.15	3.40	41.7%
	0.25	Cyto	24.68%	30.19%	39.88%	5.26%	7.79	3.79	48.6%
		Default	23.91%	31.89%	36.70%	7.50%	9.00	3.75	41.7%
	0.5	Cyto	22.22%	18.22%	51.54%	8.02%	8.54	4.18	48.9%
		Default	21.05%	18.94%	46.51%	13.50%	9.80	4.13	42.2%
	1.25	Cyto	16.09%	12.57%	59.43%	11.92%	9.15	4.58	50.1%
		Default	13.96%	13.21%	52.15%	20.68%	10.40	4.61	44.3%
	2	Cyto	13.56%	11.75%	61.29%	13.40%	9.30	4.69	50.4%
		Default	10.91%	12.40%	55.84%	20.84%	10.34	4.72	45.6%

## Summary of Animals Used by GHS Toxicity Category and Cell Type

Toxcat	Cell	Sigma	Method	Std. Error	Animals	Difference	P-Value*	% Savings	
1	3T3	0.12	Cyto	0.020	10.83	-0.33	0.3538	-3.1%	
			Default	0.017	10.50				
		0.25	Cyto	0.022	11.35	-0.17	0.2670	-1.5%	
			Default	0.019	11.18				
		0.5	Cyto	0.023	11.75	-0.05	0.1627	-0.4%	
			Default	0.020	11.70				
		1.25	Cyto	0.025	11.96	0.05	0.3089	0.4%	
			Default	0.023	12.01				
	2	Cyto	0.026	11.80	-0.01	0.2670	-0.1%		
		Default	0.026	11.80					
	Average Animal Difference:						-0.10		
	NHK	0.12	Cyto	0.017	11.36	-0.83	0.2285	-7.9%	
			Default	0.017	10.53				
		0.25	Cyto	0.019	12.08	-1.08	0.0603	-9.8%	
			Default	0.019	11.00				
		0.5	Cyto	0.020	12.44	-0.90	<b>0.0193</b>	-7.8%	
			Default	0.020	11.54				
		1.25	Cyto	0.022	12.65	-0.69	<b>0.0309</b>	-5.8%	
			Default	0.024	11.96				
	2	Cyto	0.024	12.42	-0.73	<b>0.0245</b>	-6.2%		
	Default	0.026	11.69						
Average Animal Difference:						-0.85			
2	3T3	0.12	Cyto	0.019	8.39	-0.44	0.2732	-5.5%	
			Default	0.015	7.95				
		0.25	Cyto	0.022	8.88	-0.46	0.3429	-5.5%	
			Default	0.018	8.42				
		0.5	Cyto	0.026	9.44	-0.54	0.3429	-6.1%	
			Default	0.023	8.90				
		1.25	Cyto	0.031	9.93	-0.61	0.3429	-6.5%	
			Default	0.029	9.33				
	2	Cyto	0.032	10.00	-0.45	0.3429	-4.7%		
		Default	0.030	9.55					
	Average Animal Difference:						-0.50		
	NHK	0.12	Cyto	0.017	7.53	0.67	0.0888	8.2%	
			Default	0.016	8.20				
		0.25	Cyto	0.019	8.03	0.65	0.0645	7.5%	
			Default	0.019	8.67				
		0.5	Cyto	0.023	8.39	0.82	0.0645	8.9%	
			Default	0.024	9.21				
		1.25	Cyto	0.027	8.95	0.70	0.0645	7.3%	
			Default	0.029	9.65				
	2	Cyto	0.030	9.32	0.42	0.0888	4.4%		
	Default	0.031	9.74						
Average Animal Difference:						0.65			

**Summary of Animals Used by GHS Toxicity Category and Cell Type**

Toxcat	Cell	Sigma	Method	Std. Error	Animals	Difference	P-Value*	% Savings	
3	3T3	0.12	Cyto	0.013	7.11	0.11	0.3772	1.5%	
			Default	0.015	7.23				
		0.25	Cyto	0.016	7.59	-0.21	0.1987	-2.8%	
			Default	0.015	7.38				
		0.5	Cyto	0.020	8.16	-0.33	0.2431	-4.1%	
			Default	0.018	7.84				
		1.25	Cyto	0.024	8.92	-0.28	0.1004	-3.2%	
			Default	0.024	8.65				
	2	Cyto	0.026	9.28	-0.19	0.0782	-2.0%		
		Default	0.026	9.10					
	Average Animal Difference:						-0.18		
	NHK	0.12	Cyto	0.014	7.11	0.00	0.5000	0.0%	
			Default	0.014	7.10				
		0.25	Cyto	0.017	7.61	-0.31	0.4073	-4.2%	
			Default	0.015	7.31				
		0.5	Cyto	0.021	8.24	-0.44	0.1987	-5.7%	
			Default	0.018	7.79				
		1.25	Cyto	0.025	8.93	-0.22	0.3483	-2.5%	
		Default	0.024	8.71					
2	Cyto	0.027	9.30	-0.17	0.2431	-1.8%			
	Default	0.026	9.13						
Average Animal Difference:						-0.23			
4	3T3	0.12	Cyto	0.011	6.64	0.73	0.1118	9.9%	
			Default	0.013	7.37				
		0.25	Cyto	0.014	7.21	1.01	<b>0.0485</b>	12.3%	
			Default	0.017	8.23				
		0.5	Cyto	0.017	7.73	1.26	<b>0.0120</b>	14.0%	
			Default	0.021	8.99				
		1.25	Cyto	0.021	8.44	0.99	<b>0.0074</b>	10.5%	
			Default	0.025	9.43				
	2	Cyto	0.024	8.84	0.76	<b>0.0045</b>	7.9%		
		Default	0.026	9.60					
	Average Animal Difference:						0.95		
	NHK	0.12	Cyto	0.013	7.00	0.38	0.2670	5.1%	
			Default	0.013	7.38				
		0.25	Cyto	0.015	7.41	0.87	<b>0.0485</b>	10.5%	
			Default	0.017	8.29				
		0.5	Cyto	0.017	7.84	1.11	<b>0.0152</b>	12.4%	
			Default	0.021	8.95				
		1.25	Cyto	0.022	8.52	0.95	<b>0.0074</b>	10.0%	
		Default	0.025	9.47					
2	Cyto	0.023	8.84	0.70	<b>0.0058</b>	7.3%			
	Default	0.026	9.54						
Average Animal Difference:						0.80			

### Summary of Animals Used by GHS Toxicity Category and Cell Type

Toxcat	Cell	Sigma	Method	Std. Error	Animals	Difference	P-Value*	% Savings	
5	3T3	0.12	Cyto	0.012	6.77	2.42	<b>0.0004</b>	26.4%	
			Default	0.014	9.20				
		0.25	Cyto	0.016	7.47	2.94	<b>0.0004</b>	28.2%	
			Default	0.018	10.41				
		0.5	Cyto	0.018	8.02	2.86	<b>0.0004</b>	26.3%	
			Default	0.020	10.88				
		1.25	Cyto	0.019	8.34	2.45	<b>0.0004</b>	22.7%	
			Default	0.021	10.79				
		2	Cyto	0.019	8.50	1.98	<b>0.0004</b>	18.9%	
			Default	0.022	10.48				
	Average Animal Difference:						2.53		
	NHK	0.12	Cyto	0.012	6.69	2.48	<b>0.0010</b>	27.1%	
			Default	0.014	9.17				
		0.25	Cyto	0.016	7.38	3.05	<b>0.0004</b>	29.2%	
			Default	0.018	10.43				
		0.5	Cyto	0.018	7.95	2.97	<b>0.0004</b>	27.2%	
		Default	0.020	10.92					
1.25		Cyto	0.019	8.32	2.48	<b>0.0004</b>	22.9%		
		Default	0.021	10.80					
	2	Cyto	0.019	8.43	2.00	<b>0.0004</b>	19.2%		
		Default	0.022	10.43					
Average Animal Difference:						2.60			
6	3T3	0.12	Cyto	0.014	4.54	2.15	<b>0.0027</b>	32.1%	
			Default	0.013	6.69				
		0.25	Cyto	0.020	5.76	2.15	<b>0.0102</b>	27.2%	
			Default	0.020	7.91				
		0.5	Cyto	0.024	7.35	2.20	<b>0.0016</b>	23.0%	
			Default	0.023	9.55				
		1.25	Cyto	0.024	8.28	2.63	<b>0.0007</b>	24.1%	
			Default	0.023	10.91				
		2	Cyto	0.023	8.32	2.46	<b>0.0007</b>	22.8%	
			Default	0.023	10.78				
	Average Animal Difference:						2.32		
	NHK	0.12	Cyto	0.013	4.58	2.05	<b>0.0032</b>	30.9%	
			Default	0.012	6.64				
		0.25	Cyto	0.019	5.72	2.09	<b>0.0105</b>	26.8%	
			Default	0.019	7.81				
		0.5	Cyto	0.023	7.34	2.15	<b>0.0015</b>	22.7%	
		Default	0.022	9.49					
1.25		Cyto	0.023	8.36	2.53	<b>0.0004</b>	23.2%		
		Default	0.022	10.89					
	2	Cyto	0.022	8.46	2.38	<b>0.0004</b>	21.9%		
		Default	0.022	10.84					
Average Animal Difference:						2.24			

Notes:

\*P-Value is from one-side Wilcoxon Signed Ranked test for difference in animal use between the default and cytotoxicity methods. **Boldfaced** values are significant values at p < 0.05.

Numbers are numbers of animals unless otherwise specified

Sigma - reciprocal of slope

Cyto= using NRU-predicted LD50 as starting dose

Default - using default starting dose of 175 mg/kg